

## NONHEXAGONAL OMMATIDIA ARRANGEMENT IN THE COMPOUND EYE OF EYELESS *DROSOPHILA MELANOGASTER*<sup>1</sup>

Robert D. Hester<sup>2</sup>

**ABSTRACT:** The compound eye of eyeless *Drosophila melanogaster* is composed of rectangularly arranged facets as opposed to the hexagonal arrangement one finds in the compound eyes in most insects.

**DESCRIPTORS:** compound eye, *Drosophila melanogaster*, eyeless, hexagonal, ommatidia, rectangular.

The compound eye of wild type *Drosophila melanogaster* displays the typical hexagonal arrangement of ommatidia that one finds in the compound eyes of most insects. There is a strain of *Drosophila* known as eyeless (*ey*). Members of the *ey* strain are distinguished by their greatly reduced eye size as compared to the compound eye of wild type flies. Microscopic study of the *ey* compound eye has revealed that the ommatidia of the *ey* eye are rectangularly arranged as opposed to the hexagonal arrangement that one usually expects.

### ACKNOWLEDGEMENTS

I would like to thank Dr. Côté' of the N.C. Brown Center for Ultrastructure Studies S.U.N.Y. College of Environmental Science and Forestry at Syracuse for the illustrations.

---

<sup>1</sup> Accepted for publication: January 21, 1975

<sup>2</sup> 100 Speech Drive, Baldwinsville, N.Y., 13027

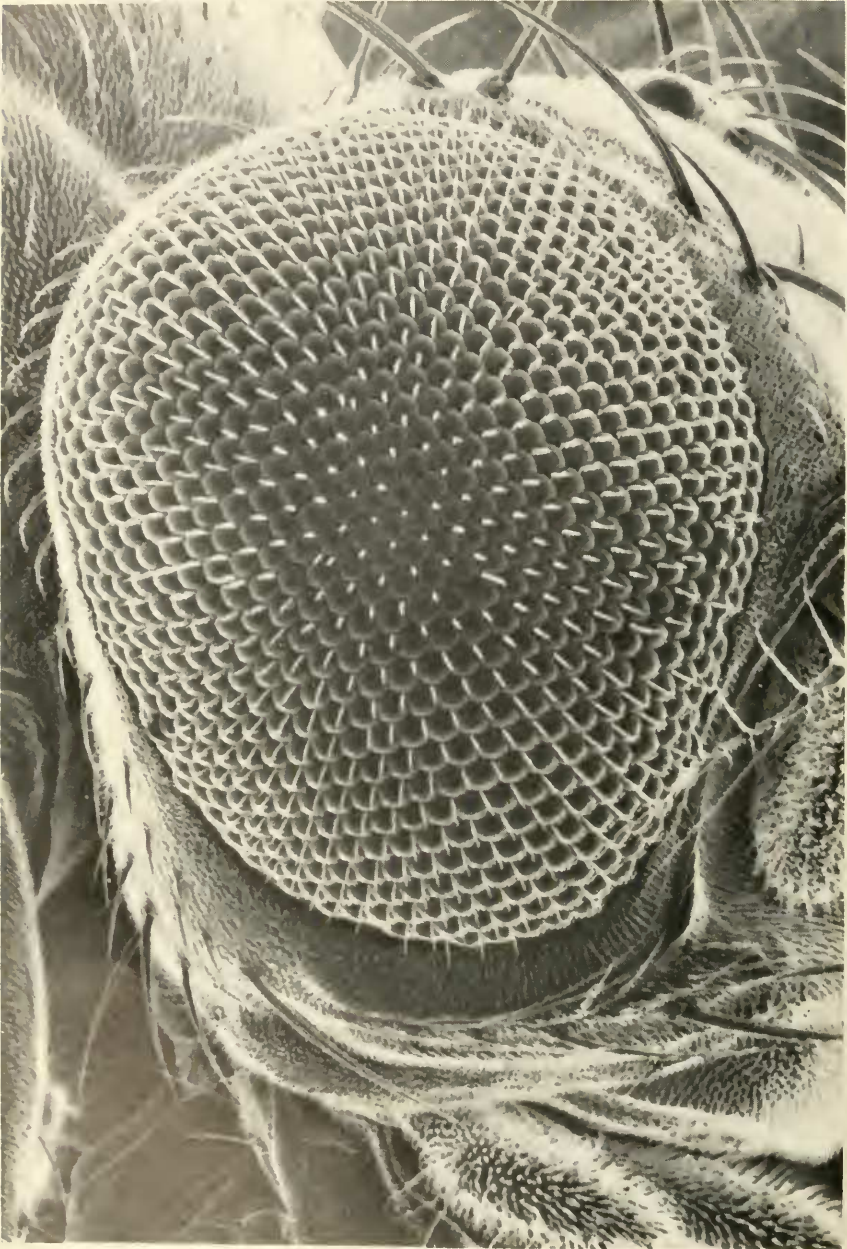


Fig. 1 Compound eye of wild type *Drosophila melanogaster* showing the hexagonal arrangement of ommatidia.



Fig. 2 Compound eye of ey fly showing the nonhexagonal ommatidia arrangement.